

REMARKS

New independent claim 12 has been added which corresponds to claim 10 the Examiner indicated would be allowable and incorporates the substance of original claims 1, 2 and 7-10 and therefore it is believed allowable.

Claims 1-11 have been amended to more clearly define Applicant's invention and distinguish it over the prior art cited by the Examiner. It is believed that claim 1 as amended defines the essence of Applicant's invention by providing spaced apart fins extending radially inwardly toward the axial center of the half sections, the opposite sides of each of said fins providing substantial surface area for absorbing heat from a gun barrel and then conducting the heat away from the gun barrel. The internal fins are closely spaced apart and are positioned along the substantial length of the inner surface of the outer wall of each of the internally finned half sections comprising the handguard for a gun barrel.

The Examiner has cited as primary references Faifer ('321 B2), Kennedy ('676), Reaume ('876), Schnyder et al. ('550 B1), and Neal ('819). None of these patents, however, remotely anticipate, teach or suggest Applicant's invention as defined in claim 1. As discussed in Applicant's specification on page 1, "Representative of current handguards is the handguard shown in Figure 2 which includes a plastic outer shell with an internal metallic liner spaced from the barrel of the gun to absorb the heat produced". Applicant on the other hand has provided a novel and unobvious alternative to the use of an internal metallic liner for carbine handguards. Applicant claimed fins being positioned along the substantial full length of the handguard half sections and being closely spaced to create a substantial area considering the opposite sides of each fin on each handguard half section. This substantial area allows for absorption of a substantial amount of heat from the gun barrel which is then slowly conducted outwardly through the outer wall of the handguard assembly in a manner that will not be uncomfortable to the user's hands.

The first patent relied on by the Examiner as anticipating claim 1 is the Faifer '321. The Examiner refers to Figure 5 and presumably the three strengthening shoulders widely spaced apart on the half section side wall. This patent is silent as to the function of these three presumably strengthening shoulders but it is clear that they were never intended to absorb heat from the gun barrel and then conduct that heat away from the gun barrel as called for in Applicant's claim 1. In fact, Faifer provides posts 62 to receive a metal heat shield of the type shown in Applicant's Figure 2 (prior art). In column 4, lines 33-37 Faifer states "Referring now to Figure 5, the interior of the half grip piece 14 may have mounting post (62) for a metal heat shield (not depicted). The use of the heat shields inside fore arm handguards is well known and various configurations of shield could be used." Moreover, the three strengthening shoulders of Faifer do not meet the claim requirements that there be closely spaced apart fins along the substantial length of the handguard half section. The three Faifer shoulders obviously do not provide opposite sides that in turn provide substantial surface area for absorbing heat from a gun barrel and then conducting the heat away from the gun barrel.

A person having ordinary skill in the art of handguards reading the Faifer patent would appreciate that the only function the three shoulders performs is to provide additional strength and not to absorb heat and conduct the heat away from a gun barrel.

The Examiner cites the Kennedy ('676) patent for what the Examiner characterizes as spaced radial fins 46 but it is abundantly clear from Figures 3 and 4 and the description column 4, lines 15-21 that "The sheet metal of which the heat shield 46 is formed may be provided with a highly reflective inner surface which serves to prevent undue heat radiation onto the mating parts 32, 34. In this way, the heat energy is reflected back into the rapidly flowing, conductive air streams flowing through the inner path 58 between the inlet port 60 and the exhaust port 62."

The Examiner then cites the Reaume ('876) patent for what the Examiner calls "spaced radial fins" referring to Figure 3, portion adjacent 166 and 168. It is clear from a study of this patent and in particular Figure 3 to which the Examiner makes reference, that there are no fins

whatsoever and what the Examiner apparently is referring to are merely shoulders for the stock 150, for mounting the stock 150 on the barrel 62.

The Examiner next cites Schnyder ('550) for what the Examiner describes as spaced radial fins with intervening gap 22 seen in Figures 6 and 8. It is very clear from these figures and the written description in this patent that what the Examiner refers to as fins are in fact "heels" as described in column 5, lines 59-67 for mounting the inner part 18 on the blank firing device 25. No heat sink function was ever intended for the heels 22, 23.

The Examiner next cites the Neal ('819) patent for what the Examiner calls "spaced radial fins with intervening gap 50" when in fact this patent describes element 50 seen in Figure 2 as "cushioning pads 50" which may be attached to the interior surfaces of half shells 14, 16. The cushioning pads 50 protect the surface of the gun to be secured and ensure positive engagement of the gun guard 10 with the gun. The number and placement of cushioning pads 50 are determined by the contours of the particular gun to be secured and the degree of protection and positive engagement sought to be achieved. The cushioning pads 50 preferably are made of foam rubber, but any suitable cushioning material may be used. (column 4, lines 24-34).

In view of the foregoing, it is apparent that none of the prior art cited by the Examiner teach or make obvious the Applicant's invention as defined in amended claim 1 and therefore it is requested that claim 1 and dependent claims 2-11 be favorably reconsidered and allowed.

As to the 35 U.S.C. § 112 rejections by the Examiner, it is believed these have been obviated by the amendments to the claims. It is noted as to the "gas tube" referred to in claim 7 that this is not a claimed element as the longitudinally extending channel is defined as being adapted to receive a gas tube.

As to the objections to claim 5 regarding inadequate written description in the specification to meet the enablement requirement, the Examiner is reminded that the material described in this claim is readily known to people having ordinary skill in this art, as for example disclosed in prior patent 3,826,589 cited by Applicant in column 2, lines 24-29 which read:

"The pump includes a pair of housing sections 1 and 2 which are formed of a high strength plastic material having high heat deflection characteristics. It has been found that glass filled DuPont Brand Zytel 612 nylon is particularly satisfactory for fabricating the housing sections 1 and 2." Among the publications cited against the '589 patent is a publication entitled "DuPont Zytel". This material is only one of many materials that would be known to persons having ordinary skill in this art to provide the characteristics called for in claim 5. It is therefore respectfully requested that these objections be reconsidered and withdrawn, and claims 1-12 be allowed and this application passed to issue.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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